

BIRDS OF THE BELLINGHAM BAY REGION.

BY J. M. EDSON.

BELLINGHAM BAY is situated in the northwest corner of the United States, or to be more exact, in one of the northwest corners; for our country here has a sort of double corner. This results from the reëntrant course of the international boundary, which leaves the 49th parallel at the Gulf of Georgia and turns southerly to the Strait of Juan de Fuca, thence westerly to the Pacific. It is the more northerly of these corners that is here considered. The bay is sixteen miles in length with an extreme width of about eight miles, its greatest dimension being from north to south. The Nooksack River debouches into the bay at its northern extremity. About the river mouth there is a delta of marsh lands several square miles in area. These are populated throughout the year and particularly during migrations by numerous species of birds. The variety, changing with the season, includes waterfowl, wading birds, Chinese Pheasants, Marsh Hawks, Magpies, Red-wing Blackbirds, Kingfishers, Yellow-throats, Tule Wrens and other species.

On the eastern shore of the bay, about five miles from its northern end, is the city of Bellingham. From this point a fertile, forest-covered plain extends northward about sixty miles. A line drawn northeast from Bellingham would mark approximately its eastern limit. On the west this plain is bounded by Bellingham Bay and the Gulf of Georgia. It is traversed from east to west by both the Nooksack and Fraser Rivers, and the international boundary crosses it between these streams, at a distance of eighteen miles from Bellingham. Southward from this city the bay is bounded by a precipitous mountain wall for about seven miles, its southern end indenting the rich Skagit River bottom. Its western limit is marked by the islands of the San Juan Archipelago and the Lummi Peninsula.

The mountain wall referred to is the terminus of a spur of the Cascades, which here extends westward to tidewater. Some of the peaks of this spur rise to a height of 3000 feet. This is the only interruption in the wide belt of alluvial land skirting the salt water from the Snohomish River on the south, to and beyond the

Fraser on the north, a distance of about 125 miles. Nature has, however, kindly crossed this obstruction with three deep valleys which connect the low lands of the south with those of the north. In the more westerly of these valleys lies Lake Samish; in the next, Lake Whatcom; in the third valley is the South Fork of the Nooksack River, flowing northward and about thirteen miles distant from Bellingham.

East of this valley lies the main body of the Cascades in a confused tangle of rugged ranges trending to nearly every point of the compass. Many of these have an elevation of 6000 feet and more, and their crests are white with perpetual snow. Some of their peaks reach an altitude of 8000 and 9000 feet, and as a centerpiece for this particular section of the Cascades stands Mt. Baker, whose volcanic cone projects skyward nearly 11,000 feet. This mountain is thirty miles due east from Bellingham.

West of Bellingham Bay lie the San Juan Islands. A number of them are of considerable size, the larger ones having an area of two or three townships, while numerous others range downward to mere rocks. Some of these islands are rugged and mountainous, one reaching a height of 2400 feet. The group is interlaced by a network of tide-swept straits and channels, connecting the Gulf of Georgia with the Strait of Juan de Fuca. These passages vary in width from several miles to mere "holes in the wall." The waters abound in marine plants and the lower forms of animal life. This is the migration route of immense schools of salmon and lesser fishes. Whales, porpoises, sea lions and seals are common. As may be supposed, these are the haunts of resident waterfowl of many species in summer, and throngs of migrants at other seasons.

A dense, dark forest originally covered this entire region, and still largely preponderates over the clearings. The timber is chiefly fir and cedar, the trees reaching a height of 200 or 300 feet. There is also a sprinkling of spruce and other conifers, while hemlock and larch are found in the mountains. Alder is the most abundant deciduous species. It grows rapidly and when not restrained will quickly reforest clearings and slashings. Cottonwood and maple are sparsely distributed in the valleys and low lands. The undergrowth comprises vine-maple, willow, crab-apple, wild rose, devil's

club, syringa, spiræa, arrow-wood, elder, thimbleberry, salmon-berry, dewberry, red and black huckleberry, service-berry, salal, currant, gooseberry and Oregon grape. Post-oak and madrona are found on the islands. Ferns and mosses of several species grow in profusion.

Bird life is most abundant among the deciduous growth and open lands. Many species are increasing in abundance with the enlargement of the cleared area, as for instance the Western House Wren, Robin, Yellow Warbler, Chipping Sparrow and Meadowlark. The gloomy depths of the evergreen forest are but sparingly inhabited by birds. Among the mountains the most characteristic species is perhaps the Varied Thrush, while the Water Ousel occurs along the streams. The chatter of a Winter Wren, the tapping of a Woodpecker or the cries of the Oregon Jay are occasionally heard. Ruffed Grouse, Kinglets, Chickadees and Juncos appear now and then, while American Crossbills and Western Evening Grosbeaks are less frequent. The Raven, California Pygmy Owl and Golden Eagle are seen at times. As the timber line is approached the Sabbath-like stillness is often broken by the vigorous booming of the Sooty Grouse. The only birds found above timber line are Hummingbirds, which haunt the flowery region intervening between the timber and the snow, and occasional Horned Larks, Sandwich or Savanna Sparrows, Solitaires, Leucostictes and Ptarmigans.

An idea of the climatic conditions of the region may be gained from statistics of the United States weather bureau. Observations at Bellingham for a period of years show a mean annual precipitation of 31.5 inches; snow, 9 inches; average maximum temperature, 84 degrees; minimum, 12 degrees above zero; number of clear days, 133; partly clear, 126; cloudy, 105; days on which rain fell, 111; prevailing wind, southwest, south and southeast. Except on the mountains, snow seldom remains more than a few days or even hours, though severe weather is sometimes unaccompanied by snow. Back from the salt water the maximum temperature is several degrees higher. On the mountains conditions are of a more boreal character and the precipitation and particularly the snowfall is much heavier, with the temperature colder. The climate is humid, as the limited range of temperature would suggest, though there is a seeming contradiction in the remarkably light

rainfall, which is much less than at most other points in western Washington, and even less than in the eastern States. That of New York City, for example, is about 40 per cent. greater than the rainfall at Bellingham. This phenomenal deficiency of precipitation at this point is accounted for by the windward position of the Olympic Mountains.

My observations of the birds of this region have extended over a period of eighteen years, though not as systematic and thorough as might be desired. Bellingham and its immediate environs, including the adjacent water-front, have been my principal field of work. The Nooksack Marsh has often been visited, and the islands west of the bay a number of times. Excursions have occasionally been made to various points in the surrounding country. There have been a number of expeditions into the mountains, where the deep cañons and highest peaks alike were visited. Some of these trips have extended as far as fifty miles east of Bellingham. It will be noticed that this territory lies almost wholly within the Transition life zone, the higher mountains only coming within the Boreal.

The following list refers to 212 species and subspecies, besides 17 others which I have added hypothetically. Except in the case of those last mentioned, identification has been made from specimens in hand in nearly all cases. In the field it is usually difficult to distinguish between subspecies, hence the relative abundance of such is in many instances hard to determine.

1. *Æchmophorus occidentalis*. WESTERN GREBE.—An abundant winter resident, also occasionally seen in summer.

2. *Colymbus holboëlli*. HOLBØLL GREBE.—Common in winter and sometimes appearing in summer.

3. *Colymbus auritus*. HORNED GREBE.—Common in winter and occurs sparingly in summer.

4. *Podilymbus podiceps*. PIED-BILLED GREBE.—I have seen it a number of times in spring and autumn, also in July, I think.

5. *Gavia imber*. LOON.—Frequently seen throughout the year. Breeds about lakes.

6. *Gavia arctica*. BLACK-THROATED LOON.—On more than one occasion I have seen what I am quite confident was this species in spring plumage.

7. *Gavia pacifica*. PACIFIC LOON.—Frequent in winter, I believe, though its plumage is hard to distinguish from that of *arctica* or *lumme* at that season.

8. **Gavia lumme.** RED-THROATED LOON.—Quite common in winter.
9. **Lunda cirrhata.** TUFTED PUFFIN.—Fairly common as a breeding summer resident among the islands of the San Juan Archipelago.
10. **Cerorhincha monocerata.** RHINOCEROS AUKLET.—Mounted specimens in Bellingham were taken at Smith's Island, Strait of Fuca.
11. **Brachyramphus marmoratus.** MARBLED MURRELET.—Abundant in winter and fairly common in summer, though apparently it does not breed hereabout.
12. **Cephus columba.** PIGEON GUILLEMOT.—It breeds abundantly among the islands and is common throughout the year.
13. **Uria troile californica.** CALIFORNIA MURRE.—Frequently seen in winter.
14. **Stercorarius parasiticus.** PARASITIC JAEGER.—Occasionally seen during migrations.
15. **Rissa tridactyla pollicaris.** PACIFIC KITTIWAKE.—Occurs occasionally at Bellingham Bay.
16. **Larus glaucescens.** GLAUCOUS-WINGED GULL.—Abundant about the harbors in winter, retiring to the islands in summer, where it breeds in considerable numbers. It is the most characteristic gull of this region.
17. **Larus occidentalis.** WESTERN GULL.—Met with occasionally in winter.
18. **Larus argentatus.** HERRING GULL.—Frequently seen throughout the winter.
19. **Larus californicus.** CALIFORNIA GULL.—Occasionally met with at all seasons.
20. **Larus delawarensis.** RING-BILLED GULL.—Occasional in winter.
21. **Larus brachyrhynchus.** SHORT-BILLED GULL.—Abundant resident of the harbors in winter.
22. **Larus heermanni.** HEERMANN GULL.—Considerable flocks of non-breeding birds of this species spend the summer among the islands, and occasional birds are seen at all other seasons.
23. **Larus philadelphia.** BONAPARTE GULL.—Of frequent occurrence during migrations, often quite numerous in August.
24. **Sterna hirundo.** COMMON TERN.—One specimen in my possession was taken at the mouth of the Nooksack River, from a flock, Sept. 2, 1904. I have seen terns on three or four occasions.
25. **Hydrochelidon nigra surinamensis.** AMERICAN BLACK TERN.—One was taken by me Aug. 26, 1899, at the Nooksack Marsh.
26. **Diomedea albatrus.** SHORT-TAILED ALBATROSS.—One specimen in the Bellingham Normal School collection was taken at Cottonwood Island.
27. **Oceanodroma kaedingi.** KAEDING PETREL.—The same collection contains one specimen of this species, believed to have been taken on Bellingham Bay.
28. **Phalacrocorax dilophus cinctatus.** WHITE-CRESTED CORMORANT.—Occasional in winter.
29. **Phalacrocorax penicillatus.** BRANDT CORMORANT.—Common at

Bellingham Bay and among the neighboring islands throughout the year. Apparently it does not breed in this vicinity.

30. *Phalacrocorax pelagicus resplendens*. BAIRD CORMORANT.—A common summer resident among the islands, where there are numerous nesting colonies.

31. *Pelecanus erythrorhynchus*. AMERICAN WHITE PELICAN.—One specimen killed by an Indian at Sandy Point is in the Bellingham Normal School collection.

32. *Merganser americanus*. AMERICAN MERGANSER.—Occasional in winter.

33. *Merganser serrator*. RED-BREASTED MERGANSER.—Frequent in winter.

34. *Lophodytes cucullatus*. HOODED MERGANSER.—Frequently met with on lakes and streams at all seasons. Breeds.

35. *Anas boschas*. MALLARD.—Common as a resident, but more so during migrations. Breeds.

36. *Chaulelasmus streperus*. GADWALL.—I have seen but one specimen, which was taken in the Nooksack Marsh Nov. 7, 1902.

37. *Mareca americana*. BALDPATE.—Common except in summer.

38. *Nettion carolinensis*. GREEN-WINGED TEAL.—Abundant during the greater part of the year, a few remaining during summer, doubtless, breeding.

39. *Querquedula discors*. BLUE-WINGED TEAL.—Occurs occasionally in the Nooksack Marsh. August records suggest its possible breeding there.

40. *Spatula clypeata*. SHOVELER.—Occasional at all seasons. Probably breeds.

41. *Dafila acuta*. PINTAIL.—Common winter resident.

42. *Aix sponsa*. WOOD DUCK.—An occasional resident.

43. *Aythya americana*. REDHEAD.—Rare winter visitor.

44. *Aythya vallisneria*. CANVAS-BACK.—Moderately common about the southern end of Bellingham Bay in winter, and occasionally seen at other points.

45. *Aythya marila*. BLUE-BILL.—Common throughout the winter, particularly in the harbors.

46. *Clangula clangula americana*. AMERICAN GOLDEN-EYE. Quite common in winter on salt water.

47. *Clangula islandica*. BARROW GOLDEN-EYE.—A specimen in the Normal School collection was taken in this vicinity.

48. *Charitonetta albeola*. BUFFLE-HEAD.—Common throughout the winter. Numerous about the wharves of the city.

49. *Harelda hyemalis*. OLD-SQUAW.—Common on Bellingham Bay except in summer.

50. *Histrionicus histrionicus*. HARLEQUIN DUCK.—Non-breeding birds of this species are found among the islands in summer, sometimes in considerable flocks. They doubtless breed in small numbers along the larger streams. They are occasionally seen in winter.

51. *Oidemia americana*. AMERICAN SCOTER.—Occasional in winter. I have also seen flocks undoubtedly of this species among the islands in summer.

52. *Oidemia deglandi*. WHITE-WINGED SCOTER.—Resident throughout the year and common everywhere on salt water, particularly in winter. I have no evidence of its breeding.

53. *Oidemia perspicillata*. SURF SCOTER.—Resident throughout the year, being very abundant in winter. It apparently does not breed.

54. *Chen hyperborea*. LESSER SNOW GOOSE.—Occasional in winter.

55. *Anser albifrons gambeli*. WHITE-FRONTED GOOSE.—Occasionally reported by sportsmen in winter.

56. *Branta canadensis*. CANADA GOOSE.—Frequent migrant, seen occasionally throughout the winter.

57. *Branta canadensis hutchinsii*. HUTCHINS GOOSE.—Frequent in winter.

58. *Branta nigricans*. BLACK BRANT.—Common on salt water during winter.

59. *Olor columbianus*. WHISTLING SWAN.—Occasionally taken in winter.

60. *Botaurus lentiginosus*. AMERICAN BITTERN.—Frequent resident, breeding in Nooksack and other marshes.

61. *Ardea herodias*. GREAT BLUE HERON.—Common throughout the year about both fresh and salt water. To what extent if any *A. h. fannini* may be mingled with our herons is not yet determined.

62. *Grus canadensis*. LITTLE BROWN CRANE.—One specimen in my possession, taken nearby, is of this species.

63. *Grus mexicana*. SANDHILL CRANE.—Occasional migrants seen in flight are presumed to be chiefly of this species.

64. *Rallus virginianus*. VIRGINIA RAIL.—A resident occasionally seen in the marshes.

65. *Porzana carolina*. CAROLINA RAIL.—Rather rare. I have seen it in summer and autumn.

66. *Fulica americana*. AMERICAN COOT.—Common resident. Abundant in marshes in winter.

67. *Phalaropus lobatus*. NORTHERN PHALAROPE.—Occasional migrant.

68. *Gallinago delicata*. WILSON SNIPE.—Common except in summer.

69. *Tringa acuminata*. SHARP-TAILED SANDPIPER.—I secured four specimens of this rare species from a flock at the mouth of the Nooksack River Sept. 2, 1892.

70. *Actodromas maculata*. PECTORAL SANDPIPER.—Occurs occasionally during migrations, at times in considerable numbers.

71. *Actodromas minutilla*. LEAST SANDPIPER.—Common during migrations.

72. *Pelidna alpina sakhalina*. RED-BACKED SANDPIPER.—Frequently seen during migrations.

73. *Ereunetes occidentalis*. WESTERN SANDPIPER.—Common during migrations, often occurring in large flocks.

74. *Totanus melanoleucus*. GREATER YELLOW-LEGS.—Regularly seen in small numbers.

75. *Totanus flavipes*. LESSER YELLOW-LEGS.—An occasional migrant of irregular occurrence.

76. *Actitis macularia*. SPOTTED SANDPIPER.—Occurs sparingly as a regular summer resident.

77. *Numenius hudsonicus*. HUDSONIAN CURLEW.—Occasionally seen in spring.

78. *Squatarola squatarola*. BLACK-BELLIED PLOVER.—Occasional during migrations.

79. *Oxyechus vociferus*. KILLDEER.—Occasional. I have seen it only in fall and winter.

80. *Arenaria melanocephala*. BLACK TURNSTONE.—A specimen in my possession was taken from a flock of three at Bellingham Bay Feb. 8, 1894.

81. *Hæmatopus bachmani*. BLACK OYSTER-CATCHER.—A few pairs are found distributed among the islands in summer, where they breed.

82. *Colinus virginianus*. BOB-WHITE.—Common on the islands and at some points on the mainland. This, like the following two, is an introduced species.

83. *Oreortyx pictus*. MOUNTAIN PARTRIDGE.—Common on the islands; occasional on the mainland.

84. *Lophortyx californicus*. CALIFORNIA PARTRIDGE.—Common on the islands, particularly the low-lying ones.

85. *Dendragapus obscurus fuliginosus*. SOOTY GROUSE.—Common resident among the mountains, but rare in the lowlands.

86. *Bonasa umbellus togata*. CANADIAN RUFFED GROUSE.—Specimens are occasionally taken in the mountains which are undoubtedly of this subspecies.

87. *Bonasa umbellus sabini*. OREGON RUFFED GROUSE.—Common resident except among the higher mountains.

88. *Lagopus leucurus*. WHITE-TAILED PTARMIGAN.—Occasionally met with at snow-line in the mountains. In severe winters it has been taken among the foothills about Lake Whatcom.

89. *Phasianus torquatus*. RING-NECKED PHEASANT.—This elegant game bird found its way into Whatcom County from British Columbia about 1898, and within five years became common throughout the lowlands. It has also been introduced on some of the islands.

90. *Columba fasciata*. BAND-TAILED PIGEON.—A summer resident common in localities. It is doubtless diminishing in numbers.

91. *Zenaidura macroura*. MOURNING DOVE.—Rare summer resident.

92. *Cathartes aura*. TURKEY VULTURE.—Occasional resident.

93. *Circus hudsonicus*. MARSH HAWK.—Of frequent occurrence in the marshes.

94. **Accipiter velox.** SHARP-SHINNED HAWK.—Occasionally seen.
95. **Accipiter cooperii.** COOPER HAWK.—Rare.
96. **Accipiter atricapillus striatulus.** WESTERN GOSHAWK.—Occasional.
97. **Buteo borealis calurus.** WESTERN RED-TAILED HAWK.—Quite rare.
98. **Buteo swainsoni.** SWAINSON HAWK.—Rare summer visitor.
99. **Aquila chrysaëtos.** GOLDEN EAGLE.—Seen occasionally in the mountains.
100. **Haliaeetus leucocephalus.** BALD EAGLE.—Occurs frequently as a resident.
101. **Falco peregrinus anatum.** DUCK HAWK.—Rather rare resident. Breeds.
102. **Falco columbarius.** PIGEON HAWK.—I have taken it I believe.
103. **Falco columbarius suckleyi.** BLACK MERLIN.—A specimen in my possession is of this subspecies. It is very difficult to distinguish between this and the preceding species in the field, but one or the other, or both, together, are frequent residents.
104. **Falco sparverius phalœna.** DESERT SPARROW HAWK.—Common summer resident.
105. **Pandion haliaëtus carolinensis.** AMERICAN OSPREY.—Common summer resident.
106. **Asio accipitrinus.** SHORT-EARED OWL.—Occasional in winter in the marshes.
107. **Scotiaptex nebulosa.** GREAT GRAY OWL.—Rare. I know of but two instances of its being taken in the county.
108. **Cryptoglaux tengmalmi richardsoni.** RICHARDSON OWL.—One specimen in my possession was taken at Glacier, Whatcom County.
109. **Megascops asio kennicottii.** KENNICOTT SCREECH OWL.—Frequent resident.
110. **Bubo virginianus pallescens.** WESTERN HORNED OWL.—Frequent resident.
111. **Bubo virginianus saturatus.** DUSKY HORNED OWL.—Common. Coloration of the plumage of the Horned Owls shows considerable variation.
112. **Nyctea nyctea.** SNOWY OWL.—Occasional winter visitor, appearing some seasons in numbers, and at others not at all.
113. **Surnia ulula caparoch.** AMERICAN HAWK OWL.—Rare summer resident. I know of three specimens having been taken in the county.
114. **Speotyto cunicularia hypogæa.** BURROWING OWL.—Rare. One specimen has been taken at Bellingham.
115. **Glaucidium gnoma californicum.** CALIFORNIA PYGMY OWL.—Fairly common resident.
116. **Coccyzus americanus occidentalis.** CALIFORNIA CUCKOO.—Occasional summer resident.
117. **Ceryle alcyon.** BELTED KINGFISHER.—Common resident throughout the year.
118. **Dryobates villosus harrisii.** HARRIS WOODPECKER.—Frequently met with throughout the year.

119. *Dryobates pubescens gairdnerii*. GAIRDNER WOODPECKER.— Frequent throughout the year.
120. *Picoides arcticus*. ARCTIC THREE-TOED WOODPECKER.— A specimen in my possession was taken in this county March 8, 1905.
121. *Sphyrapicus varius nuchalis*. RED-NAPED SAPSUCKER.— I have taken one specimen in the mountains.
122. *Sphyrapicus ruber notkensis*. NORTHERN RED-BREASTED SAPSUCKER.— Frequent resident.
123. *Ceophloeus pileatus abieticola*. NORTHERN PILEATED WOODPECKER.— A resident, frequent throughout the year.
124. *Asyndesmus torquatus*. LEWIS WOODPECKER.— Summer resident, frequent in certain localities.
125. *Colaptes cafer saturator*. NORTHWESTERN FLICKER.— Common resident, less numerous in winter.
126. *Chordeiles virginianus henryi*. WESTERN NIGHTHAWK.— Common summer resident.
127. *Cypseloides niger borealis*. BLACK SWIFT.— Occasional summer resident, frequently appearing in numbers in early June.
128. *Chætura vauxi*. VAUX SWIFT.— Frequent summer resident.
129. *Selasphorus rufus*. RUFOUS HUMMINGBIRD.— Common summer resident. I have seen it as early as February.
130. *Selasphorus alleni*. ALLEN HUMMINGBIRD.— Frequent resident.
131. *Stellula calliope*. CALLIOPE HUMMINGBIRD.— Rare.
132. *Tyrannus tyrannus*. KINGBIRD.— Occasional summer resident.
133. *Tyrannus verticalis*. ARKANSAS KINGBIRD.— Occasional summer resident.
134. *Nuttallornis borealis*. OLIVE-SIDED FLYCATCHER.— Frequent summer resident.
135. *Contopus richardsonii*. WESTERN WOOD PEWEE.— Frequent summer resident.
136. *Empidonax difficilis*. WESTERN FLYCATCHER.— Common summer resident.
137. *Empidonax traillii*. TRAILL FLYCATCHER.— Common summer resident.
138. *Otocoris alpestris merrilli*. DUSKY HORNED LARK.— One specimen in my possession, which was taken in the mountains, is authoritatively assigned to this subspecies.
139. *Pica pica hudsonia*. AMERICAN MAGPIE.— Common in localities except in summer.
140. *Cyanocitta stelleri*. STELLER JAY.— A resident common throughout the year.
141. *Perisoreus obscurus*. OREGON JAY.— Common in the mountains and seen frequently in the lowlands in winter.
142. *Corvus corax principalis*. NORTHERN RAVEN.— Occasional resident among and near the mountains.
143. *Corvus brachyrhynchos*. AMERICAN CROW.— I have occasionally seen and have taken specimens believed to be of this species.

144. *Corvus caurinus*. NORTHWEST CROW.—A resident common throughout the year.

145. *Nucifraga columbiana*. CLARKE NUTCRACKER.—One specimen in my possession was taken in Bellingham Nov. 25, 1898.

146. *Molothrus ater*. COWBIRD.—I have seen one flock in mid-winter.

147. *Agelaius phoeniceus caurinus*. NORTHWESTERN RED-WING.—Of frequent occurrence in the marsh lands, flocking in winter.

148. *Sturnella magna neglecta*. WESTERN MEADOWLARK.—Common throughout the year.

149. *Euphaga cyanocephalus*. BREWER BLACKBIRD.—Frequent at all seasons, flocking in winter.

150. *Hesperiphona vespertina montana*. WESTERN EVENING GROSBILL.—Occasionally seen in the mountains in summer and in the lowlands in winter.

151. *Carpodacus purpureus californicus*. CALIFORNIA PURPLE FINCH.—Common; occasional in winter.

152. *Loxia curvirostra minor*. AMERICAN CROSSBILL.—Occasional resident.

153. *Leucosticte tephrocotis littoralis*. HEPBURN LEUCOSTICTE.—Occasional in the mountains. I have taken it at Bellingham in winter.

154. *Astragalinus tristis salicamans*. WILLOW GOLDFINCH.—I had seen but one pair of this species previous to the spring of 1908, when they appeared a number of times in one particular locality.

155. *Spinus pinus*. PINE SISKIN.—Frequently seen throughout the year, usually in considerable flocks.

156. *Passer domesticus*. ENGLISH SPARROW.—Common in Bellingham, where it made its first appearance in 1900.

157. *Passerina nivalis*. SNOWFLAKE.—Rare. I have seen but one specimen, which was taken Nov. 10, 1897.

158. *Passerculus sandwichensis alaudinus*. WESTERN SAVANNA SPARROW.—Common summer resident.

159. *Zonotrichia leucophrys nuttalli*. NUTTALL SPARROW.—Common summer resident.

160. *Zonotrichia coronata*. GOLDEN-CROWNED SPARROW.—Frequently observed as a migrant.

161. *Spizella socialis arizonæ*. WESTERN CHIPPING SPARROW.—Frequent summer resident.

162. *Junco hyemalis shufeldti*. SHUFELDT JUNCO.—A frequent summer resident and abundant throughout the remainder of the year. I cannot say that all our Juncos are of this subspecies, but I have not yet taken a satisfactory specimen of *J. h. oregonus*.

163. *Melospiza cinerea morphna*. RUSTY SONG SPARROW.—Common throughout the year.

164. *Melospiza cinerea rufina*. SOOTY SONG SPARROW.—Taken at all seasons. In the field this subspecies is with difficulty distinguished from the preceding, hence the relative abundance of the two is problematic.

One Song Sparrow specimen submitted by me to the U. S. Bureau of Biological Survey is identified as belonging to the proposed subspecies *M. c. phaea*, "Oregon Song Sparrow."

165. *Passerella iliaca fuliginosa*. SOOTY FOX SPARROW.—Occasional summer resident.

166. *Pipilo maculatus oregonus*. OREGON TOWHEE.—Resident; common throughout the year.

167. *Zamelodia melanocephala*. BLACK-HEADED GROSBEAK.—Occasional summer resident.

168. *Cyanospiza amoena*. LAZULI BUNTING.—Occasional summer resident.

169. *Piranga ludoviciana*. LOUISIANA Tanager.—Frequent summer resident.

170. *Progne subis hesperia*. WESTERN MARTIN.—Frequent summer resident.

171. *Petrochelidon lunifrons*. CLIFF SWALLOW.—I have seen one bird which clearly appeared to be of this species.

172. *Hirundo erythrogastra*. BARN SWALLOW.—Common summer resident.

173. *Iridoprocne bicolor*. WHITE-BELLIED SWALLOW.—Common summer resident.

174. *Tachycineta thalassina lepida*. NORTHERN VIOLET-GREEN SWALLOW.—Frequent summer resident. More common during migrations.

175. *Stelgidopteryx serripennis*. ROUGH-WINGED SWALLOW.—Frequent summer resident.

176. *Ampelis garrulus*. BOHEMIAN WAXWING.—A bird of this species was brought to me March 24, 1903. It was taken in this city, and may possibly have been an escaped cage bird.

177. *Ampelis cedrorum*. CEDAR WAXWING.—Common resident; not infrequent in winter.

178. *Lanius borealis*. NORTHERN SHRIKE.—Occasional in winter.

179. *Vireo gilvus swainsonii*. WESTERN WARBLING VIREO.—Common summer resident.

180. *Vireo solitarius cassinii*. CASSIN VIREO.—Rare summer resident.

181. *Vireo huttoni*. HUTTON VIREO.—Rare. I have taken a specimen as late as Nov. 16. Identification was made by the Bureau of Biological Survey.

182. *Helminthophila celata lutescens*. LUTESCENT WARBLER.—Our most abundant warbler; a summer resident.

183. *Dendroica aestiva*. YELLOW WARBLER.—Common summer resident.

184. *Dendroica coronata*. MYRTLE WARBLER.—I saw this species in the spring of 1908 on several occasions. Its resemblance to the female *D. auduboni* is perhaps the cause of its having formerly been overlooked.

185. *Dendroica auduboni*. AUDUBON WARBLER.—Frequent as a summer resident, and not infrequent in winter.

186. *Dendroica nigrescens*. BLACK-THROATED GRAY WARBLER.— Occasional summer resident.

187. *Dendroica townsendi*. TOWNSEND WARBLER.— Rare summer resident.

188. *Geothlypis tolmiei*. MACGILLIVRAY WARBLER.— Common summer resident.

189. *Geothlypis trichas arizela*. PACIFIC YELLOW-THROAT.— Frequent summer resident in the vicinity of marshes.

190. *Wilsonia pusilla pileolata*. PILEOLATED WARBLER.— Common summer resident — or at least, it and the following subspecies together are common.

191. *Wilsonia pusilla chryseola*. GOLDEN PILEOLATED WARBLER.— I am not as yet able to say how this subspecies compares in abundance with the preceding. Specimens submitted by me to the U. S. Bureau of Biological Survey are reported to have included both subspecies.

192. *Anthus pensilvanicus*. AMERICAN PIPIT.— Common during migrations, particularly in autumn, appearing in flocks.

193. *Cinclus mexicanus*. WATER OUZEL.— Frequent along mountain streams in summer and occasional in winter.

194. *Thryomanes bewickii calophonus*. NORTHWEST BEWICK WREN.— Resident throughout the year; common in summer.

195. *Troglodytes ædon parkmanii*. PACIFIC HOUSE WREN.— Frequent summer resident.

196. *Olbiorchilus hiemalis pacificus*. WESTERN WINTER WREN.— Common in winter and frequent as a summer resident.

197. *Telmatodytes palustris paludicola*. TULE WREN.— Common summer resident of marsh lands; frequent in winter.

198. *Certhia familiaris occidentalis*. TAWNY CREEPER.— Occasional summer resident.

199. *Sitta canadensis*. RED-BREASTED NUTHATCH.— Occasional summer resident.

200. *Parus atricapillus occidentalis*. OREGON CHICKADEE.— Common throughout the year.

201. *Parus rufescens*. CHESTNUT-BACKED CHICKADEE.— Resident throughout the year. Occasional.

202. *Psaltriparus minimus saturatus*. PUGET SOUND BUSH-TIT.— Rare summer resident.

203. *Regulus satrapa olivaceus*. WESTERN GOLDEN-CROWNED KINGLET.— Common throughout the year.

204. *Regulus calendula*. RUBY-CROWNED KINGLET.— Seen occasionally.

205. *Regulus calendula grinnelli*. SITKAN KINGLET.— Occasional in winter and during migrations.

206. *Myadestes townsendii*. TOWNSEND SOLITAIRE.— Occasional summer resident, more commonly at high altitudes.

207. *Hylocichla ustulata*. RUSSET-BACKED THRUSH.— Everywhere common in summer.

208. *Hylocichla guttata nana*. DWARF HERMIT THRUSH.—Rare. I have taken one specimen during spring migration pronounced by the Bureau of Biological Survey to be of this subspecies.

209. *Merula migratoria*. AMERICAN ROBIN.—Occasional. I cannot say just how it compares in abundance with the following subspecies.

210. *Merula migratoria propinqua*. WESTERN ROBIN.—Common in summer and frequent in winter.

211. *Ixoreus naevius*. VARIED THRUSH.—Common in the mountains in summer and frequent in the lowlands in winter.

212. *Sialia mexicana*. WESTERN BLUEBIRD.—Frequent summer resident and occasional in winter.

HYPOTHETICAL LIST.

1. *Synthliboramphus antiquus*. ANCIENT MURRELET.—Birds seen on several occasions were strongly suspected of belonging to this species.

2. *Stercorarius pomarinus*. POMARINE JAEGER.—One specimen taken has been noted as of this species, but identification was unsatisfactory.

3. *Phalacrocorax pelagicus robustus*. VIOLET-GREEN CORMORANT.—Believed to be not infrequent among our winter Cormorants.

4. *Larus vegæ*. VEGA GULL.—In January, 1905, a gull was observed by Mr. W. L. Dawson and myself at Bellingham, which was suspected of being *L. vegæ*.

5. *Aythya affinis*. LESSER SCAUP DUCK.—Birds probably of this species have been seen but thus far no satisfactory specimen has been secured.

6. *Aythya collaris*. RING-NECKED DUCK.—This species also is believed to have been seen, though none have been taken.

7. *Branta canadensis occidentalis*. WHITE-CHEEKED GOOSE.—Descriptions from sportsmen of geese taken by them would suggest that they were of this subspecies.

8. *Ardea herodias fannini*. NORTHWEST COAST HERON.—Specimens seen may perhaps be assigned to this subspecies.

9. *Charadrius dominicus*. GOLDEN PLOVER.—A sportsman who is familiar with the species avers that he once saw a flock and took specimens at a point near Bellingham.

10. *Ægialitis semipalmata*. SEMIPALMATED PLOVER.—A flock seen by me were thought to be of this species.

11. *Canachites franklinii*. FRANKLIN GROUSE.—Reported by a sportsman as having been taken at a point twenty miles northeast of Bellingham.

12. *Empidonax hammondi*. HAMMOND FLYCATCHER.—Birds have been seen which were thought to be of this species.

13. *Passerculus sandwichensis*. SANDWICH SPARROW.—Birds observed are supposed to have been of this species, though no satisfactory specimen has yet been secured.

14. *Junco hyemalis oregonus*. OREGON JUNCO.—Presumed to occur to some extent among the abundant winter Juncos, though unquestionable specimens have not been taken.

15. *Acanthis linaria*. REDPOLL.—A bird has been seen which was probably of this species.

16. *Passerella iliaca unalaschensis*. TOWNSEND SPARROW.—Specimens observed prior to the recognition of *P. i. fuliginosa* were recorded as of this subspecies, perhaps not always erroneously.

17. *Riparia riparia*. BANK SWALLOW.—I have several times seen birds thought to be of this species, but have failed to secure a specimen.

LIST OF THE BIRDS OF LOUISIANA. PART V.

BY G. E. BEYER, ANDREW ALLISON, AND H. H. KOPMAN.

(Continued from page 180.)

129. BOB-WHITE (*Colinus virginianus*). A common resident except in the swamp sections of the southeastern part of the State; but even in this low, fertile alluvial district, the Bob-white is fairly well established about the large sugar plantations, the thorough drainage of the land in such cases providing a suitable habitat for the species. In the uplands, this bird is most abundant in piney sections. In the southern part of the State mating begins about March 1, and nesting is well under way by the middle of April. Two broods are frequently reared, and birds just beginning to fly may often be seen as late as September 1.

The natural cover of Bob-whites in the piney sections is the edges of the runs or "branches" with which such country is interspersed. The birds usually seek such cover when flushed in the open pines. The thicket-like growths of small oak and hickory and of such shrubs and vines as witchhazel, smilax, and sumach that often occur in the higher portions of the pine woods also serve as excellent cover for Bob-whites, from a standpoint of both food and shelter. In the fertile alluvial section of the southeast, the sugar cane or corn and the edges of the swamp give this species its necessary cover. On model plantations, the ditch banks are kept clean, but in some cases Bob-whites may resort to them in safety.

130. PRAIRIE HEN (*Tympanuchus americanus*). This species, represented in western Louisiana by probably both the typical form, and by Attwater's Prairie Hen (*T. americanus attwateri*) is growing constantly scarcer in the State, and is known only near the Texas border.

131. WILD TURKEY (*Meleagris gallopavo silvestris*). The Wild Turkey is still common in some sections of the State. It appears to be entirely absent from the typical fertile alluvial section of the southeast. It is commonest in piney sections, and extends its range as far as the coast through the narrow strip of piney lands on the west of Pearl River.